

What is claimed is:

- 1     1.     An electrical connector that can be electrically connected to a printed circuit  
2     board, the electrical connector having ground conductors and signal conductors in a  
3     plurality of rows, comprising:  
4         each of the plurality of rows includes:  
5             a plurality of ground conductors and signal conductors, with each signal  
6             conductor having at least one corresponding ground conductor;  
7             each signal conductor having a contact tail that electrically connects to the  
8             printed circuit board;  
9             each corresponding ground conductor having at least two contact tails that  
10            electrically connect to the printed circuit board; and  
11            the contact tails of the signal conductors and the ground conductors are  
12            positioned relative to one another so that for each signal conductor contact tail,  
13            there are ground conductor contact tails adjacent either side of the signal  
14            conductor contact tail.
- 1     2.     The electrical connector of claim 1, wherein the contact tails of the ground  
2     conductors and the signal conductors comprise press-fit contact tails.
- 1     3.     The electrical connector of claim 1, wherein the contact tails of the ground  
2     conductors and the signal conductors comprise pressure mount contact tails.

1 4. The electrical connector of claim 1, wherein the contact tails of the ground  
2 conductors and the signal conductors comprise contact pads adapted for soldering to the  
3 printed circuit board.

1 5. The electrical connector of claim 1, wherein the contact tails of the ground  
2 conductors and the signal conductors are adapted for paste-in-hole solder attachment to  
3 the printed circuit board.

1 6. The electrical connector of claim 1, wherein a distance between a signal  
2 conductor contact tail and an adjacent ground conductor contact tail of a row is less than  
3 a distance between adjacent rows.

1 7. The electrical connector of claim 1, wherein for each of the plurality of rows, a  
2 distance between a signal conductor contact tail and an adjacent ground conductor  
3 contact tail on one side is similar to a distance between the signal conductor contact tail  
4 and an adjacent ground conductor contact tail on the other side.

1 8. The electrical connector of claim 1, wherein for each of the plurality of rows, the  
2 contact tails of the signal conductors and the ground conductors are configured to align  
3 along a line when connected to the printed circuit board.

1     9.     An electrical connector that can be electrically connected to a printed circuit  
2     board, the electrical connector having ground conductors and signal conductors in a  
3     plurality of rows, comprising:  
4         each of the plurality of rows includes:  
5             a plurality of ground conductors and signal conductors, with each signal  
6             conductor having a corresponding ground conductor;  
7             each signal conductor having a contact tail that electrically connects to the  
8             printed circuit board;  
9             each corresponding ground conductor having at least two contact tails  
10            spaced from one another that electrically connect to the printed circuit board; and  
11            for each corresponding signal conductor and ground conductor, the contact  
12            tail of the signal conductor is positioned between the contact tails of the ground  
13            conductor so as to form a repeating pattern of ground conductor contact tail -  
14            signal conductor contact tail - ground conductor contact tail.

1     10.    The electrical connector of claim 9, wherein the contact tails of the ground  
2     conductors and the signal conductors comprise press-fit contact tails.

1     11.    The electrical connector of claim 9, wherein the contact tails of the ground  
2     conductors and the signal conductors comprise pressure mount contact tails.

1 12. The electrical connector of claim 9, wherein the contact tails of the ground  
2 conductors and the signal conductors comprise contact pads adapted for soldering to the  
3 printed circuit board.

1 13. The electrical connector of claim 9, wherein the contact tails of the ground  
2 conductors and the signal conductors are adapted for paste-in-hole solder attachment to  
3 the printed circuit board.

1 14. The electrical connector of claim 9, wherein a distance between a signal  
2 conductor contact tail and an adjacent ground conductor contact tail of a row is less than  
3 a distance between adjacent rows.

1 15. The electrical connector of claim 9, wherein for each of the plurality of rows, a  
2 distance between a signal conductor contact tail and one adjacent ground conductor  
3 contact tail is similar to a distance between the signal conductor contact tail and the other  
4 adjacent ground conductor contact tail.

1 16. The electrical connector of claim 9, wherein for each of the plurality of rows, the  
2 contact tails of the signal conductors and the ground conductors are configured to align  
3 along a line when connected to the printed circuit board.

1 17. An electrical connector that can be connected to a printed circuit board, the  
2 electrical connector having ground conductors and signal conductors in a plurality of  
3 interleaved first and second rows, comprising:

4 each of the plurality of first rows includes:

5 a plurality of ground conductors and signal conductors, with each signal  
6 conductor having a corresponding ground conductor;

7 each signal conductor having a contact tail that connects to the printed  
8 circuit board;

9 each corresponding ground conductor having at least two contact tails that  
10 connect to the printed circuit board;

11 the contact tails of the signal conductors and the ground conductors are  
12 positioned relative to one another so that for each signal conductor contact tail,  
13 there are ground conductor contact tails adjacent opposite sides of the signal  
14 conductor contact tail;

15  
16 each of the plurality of second rows includes:

17 a plurality of ground conductors and signal conductors, with each signal  
18 conductor having a corresponding ground conductor;

19 each signal conductor having a contact tail that connects to the printed  
20 circuit board;

21 each corresponding ground conductor having at least two contact tails that  
22 connect to the printed circuit board;

23 the contact tails of the signal conductors and the ground conductors are  
24 positioned relative to one another so that for each signal conductor contact tail,  
25 there are ground conductor contact tails adjacent opposite sides of the signal  
26 conductor contact tail; and

27

28       the positions of the signal conductors in the first rows relative to the positions of  
29       the signal conductors in the second rows are offset so that each signal conductor contact  
30       tail in the first and second rows has a ground conductor contact tail adjacent at least three  
31       sides.

1       18.     The electrical connector of claim 17, wherein the contact tails of the ground  
2       conductors and the signal conductors comprise press-fit contact tails.

1       19.     The electrical connector of claim 17, wherein the contact tails of the ground  
2       conductors and the signal conductors comprise contact pads adapted for soldering to the  
3       printed circuit board.

1       20.     The electrical connector of claim 17, wherein for each of the plurality of first and  
2       second rows, a distance between a signal conductor contact tail and one adjacent ground  
3       conductor contact tail is similar to a distance between the signal conductor contact tail  
4       and the other adjacent ground conductor contact tail.

1       21.     The electrical connector of claim 17, wherein for each of the plurality of first and  
2       second rows, the contact tails of the signal conductors and the ground conductors are  
3       configured to align along a line when connected to the printed circuit board.

1    22.    An electrical connector that can be electrically connected to a printed circuit  
2    board, the electrical connector having ground conductors and signal conductors in a  
3    plurality of rows, comprising:  
4        each of the plurality of rows includes:  
5            a plurality of ground conductors and signal conductors;  
6            the signal conductors each having a contact tail that electrically connects  
7    to the printed circuit board;  
8            at least some of the ground conductors having at least two contact tails  
9    that electrically connect to the printed circuit board; and  
10          the contact tails of the signal conductors and the ground conductors are  
11    positioned relative to one another so that for each signal conductor contact tail,  
12    there are ground conductor contact tails adjacent either side of the signal  
13    conductor contact tail.